MIDAS WATER SYSTEM (PWS #1090031)
SOURCE WATER ASSESSMENT REPORT

November 13, 2001

State of Idaho
Department of Environmental Quality

Disclaimer: This publication has been developed as part of an informational service for the source water assessments of public water systems in Idaho and is based on the data available at the time and the professional judgement of the staff. Although reasonable efforts have been made to present accurate information, no guarantees, including expressed or implied warranties of any kind, are made with respect to this publication by the State of Idaho or any of its agencies, employees, or agents, who also assume no legal responsibility for the accuracy of presentations, comments, or other information in this publication. The assessment is subject to modification if new data is produced.

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality (DEQ) is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source, and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for Midas Water System (PWS #1090031),* located in Garfield Bay on Lake Pend Oreille, describes the public drinking water system, the associated potential contaminant sources located within a 1,000 foot boundary around the drinking water source, and the susceptibility (risk) that may be associated with any potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should <u>not</u> be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

Midas Water System samples for total coliform bacteria quarterly. The last positive sample was collected 9/19/01. There have been no other documented types of contamination in the water system. Nitrate levels are monitored annually and nitrate is monitored every nine years. Both are at acceptable levels.

The water system consists of one well. The well was drilled in 1999 to replace a spring source. It was assigned low system construction and hydrologic sensitivity scores. The well is 403' deep and uses a 6-inch casing. Well construction directly affects the ability of a well to protect the aquifer from contaminants. The Idaho Department of Water Resources (IDWR) *Well Construction Standards Rules (1993)* require all public water systems (PWSs) to follow DEQ standards as well. IDAPA 58.01.08.550 requires that PWSs follow the *Recommended Standards for Water Works (1997)* during construction. Various aspects of the standards can be assessed from well logs. Table 1 of the *Recommended Standards for Water Works (1997)* states that 6-inch steel casing requires a thickness of 0.280 inches. The Midas Water System well uses 0.250-inch thick casing. The well was drilled into a shale formation, which provides some protection against contaminants moving underground. The well's depth also provides some protection against contamination. The wellhead and sanitary seal are intact and the well is located outside of the 100-year floodplain.

The well is located on an irrigated and fertilized golf course. There are two potential contaminant sites located within the well's source water assessment area. The first site is a gas station and the second site is a gravel pit. Fuel stored at the gas station is poses a contamination threat. The gravel pit poses minimal risk. Information regarding the potential contaminants within the 1,000-foot boundary have been summarized and included in Table 1.

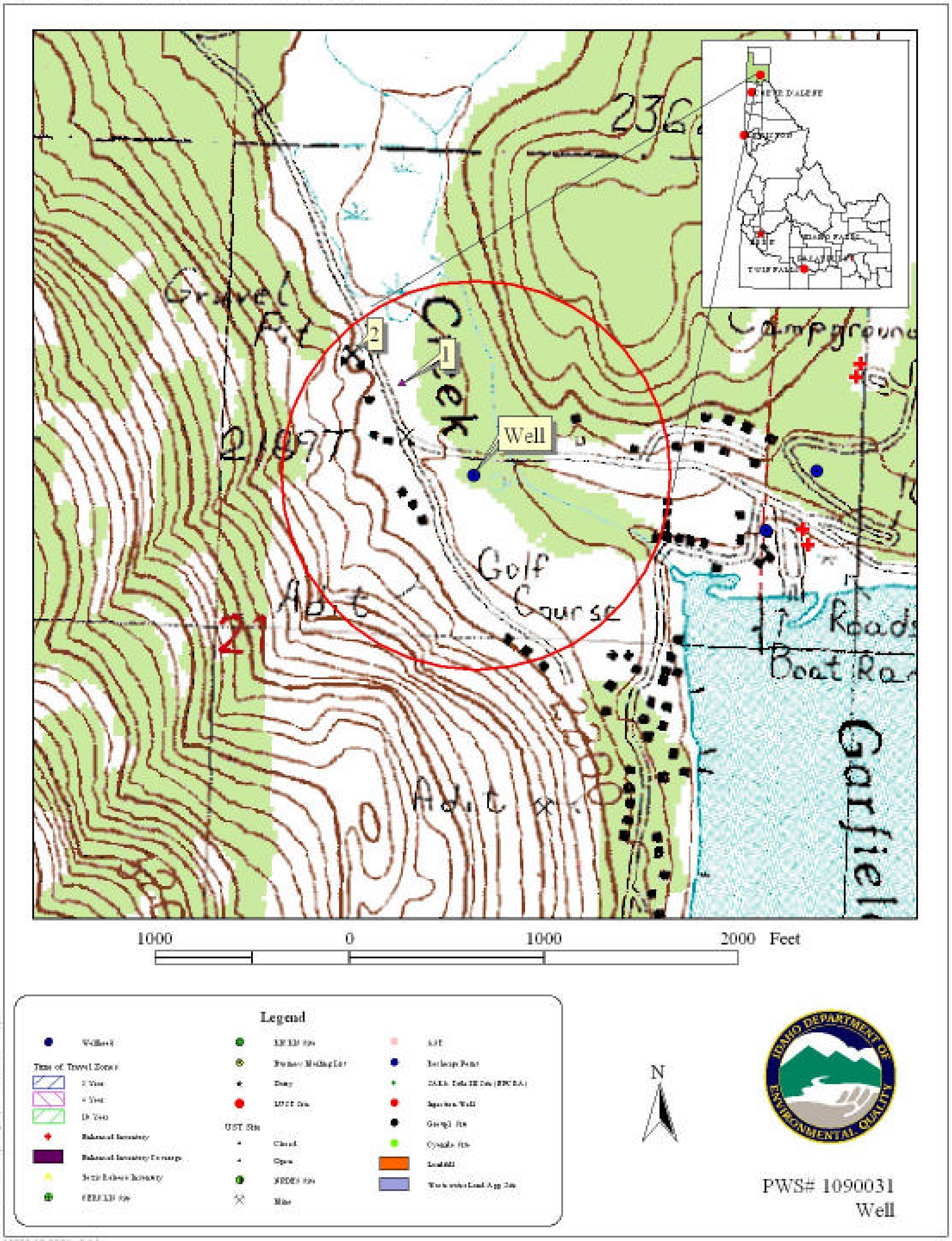
Table 1.

SITE #	Source Description[1]	Source of Information	Potential Contaminants[2]
1	UST	Database Search	VOC, SOC
2	Gravel Pit	Enhanced Inventory	Minimal

[1]UST = underground storage tank
[2]VOC = volatile organic chemical, SOC = synthetic organic chemical

The well's overall susceptibility to contamination is low in all chemical categories. A copy of the susceptibility analysis for this system along with a map showing any potential contaminant sources is included with this summary.

Figure 1. Midas Water System Delineation Map and Potential Contaminant Source Locations



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This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Midas Water System should focus source water protection activities on implementation of practices aimed at maintaining current water quality. The system should develop a drinking water protection plan that addresses public education, potential contaminant site management and contingency planning. Local residents and businesses should be made aware of the well's location and of the location of the well's source water assessment area. They should be advised of proper septic tank maintenance methods and be encouraged to dispose of household hazardous waste properly. Managers of the gas station and golf course located within the designated source water area should be asked to ensure the use of best management practices in the operation of their businesses. Fuel transfers and herbicide/fertilizer application are of special concern. The water system may want to establish a dialogue with the state and local agencies related to planning of future potential contaminant sites within the well's source water assessment area. The water system should draw up a contingency plan that outlines emergency response procedures and contact names and numbers. The plan should also identify an alternative source of water in the event of a drinking water emergency. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing source water protection strategies please Alan Miller at the Coeur d'Alene regional IDEQ office at (208) 769-1422.

DEQ website:

http://www.deq.state.id.us

Attachment A

Midas Water System
Susceptibility Analysis
Worksheet

Ground Water Susceptibility Report Public Water System Name : MIDAS WATER SYSTEM Well# : WELL

Public Water System Number 1090031 11/13/01 4:25:19 PM

1. System Construction		SCORE
Drill Date	11/3/99	
Driller Log Available	YES	
Sanitary Survey (if yes, indicate date of last survey)	YES	2001
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	YES	0
Casing and annular seal extend to low permeability unit	YES	0
Highest production 100 feet below static water level	YES	0
Well located outside the 100 year flood plain	YES	0
Total System Construction Score		1

2. Hydrologic Sensitivity		
Soils are poorly to moderately drained	YES	0
Vadose zone composed of gravel, fractured rock or unknown	NO	0
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	YES	0
Total Hydrologic Score		1

3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	GOLF COURSE	1	1	1	1
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		1	1	1	1
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	0	1	1	0
(Score = # Sources X 2) 8 Points Maximum		0	2	2	0
Sources of Class II or III leachable contaminants or	YES	0	1	1	
4 Points Maximum		0	1	1	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	25 to 50% Irrigated Land	2	2	2	2
Total Potential Contaminant Source / Land Use Score - Zone 1B		2	5	5	2
Cumulative Potential Contaminant / Land Use Score		3	6	6	3
4. Final Susceptibility Source Score		3	4	4	3
5. Final Well Ranking		Low	Low	Low	Low

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)

2) 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.375)

Ground Water Final Susceptibility Scoring

0-5 = Low Susceptibility

6-12 = Moderate Susceptibility

> 13 = High Susceptibility

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ASuperfund@ is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (IDEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by IDEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.